

# Fisher® GX Bulletin Supplement

Use this bulletin supplement in conjunction with bulletin 51.1:GX, Fisher GX Control Valve and Actuator System, D103171X012. This supplement provides additional information for the Fisher GX control valve and actuator.

The standard GX actuator comes with a supply pressure range of 4 to 6 bar (58 to 87 psi) for both air-to-open (ATO) and air-to-close (ATC) configurations. By selecting the appropriate option, the GX actuator will operate with a minimum supply pressure of 3 bar (44 psi) and 2 bar (29 psi) at the expense of maximum allowable shutoff pressure. **Note: These options do not apply to the size 1200 actuator which operates on a standard pressure range of 3 to 6 bar.**

The primary focus of this bulletin is to provide maximum pressure drop tables for the corresponding GX constructions.

Each of these tables includes air-to-open (standard) and air-to-close (optional) actuator configurations for varying supply pressure ranges, as well as the maximum actuator air supply pressure and associated pressure drop.

Tables are also provided for shutoff classification capability. These tables immediately follow their respective constructions. See table 1 for an index of these tables.

**Table 1. Index to Trim Tables**

Stem Material	Bonnet Style	Max Pressure Drop and Max Supply Pressure	Shutoff Capabilities
High Strength	Standard	Table 2	Table 3
	Extension / Bellows	Table 4	Table 5
Low Strength	Standard	Table 6	Table 7
	Bellows	Table 8	Table 9

**High Strength Stem Material:** S31603, S20910, N05500

**Low Strength Stem Material:** N06022, S31803, N10665



**Fisher GX Control Valve, Actuator, and FIELDVUE™ DVC2000 Digital Valve Controller**



# Product Bulletin

51.1:GX(S1)  
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## GX Control Valve and Actuator D103209X012

Table 2 contains information regarding the maximum pressure drop capability of the GX with a standard bonnet and S31603 trim. Maximum pressure drop is

calculated at the maximum supply pressure for each construction. The allowable leakage classes are given in table 3.

**Table 2. Maximum Pressure Drops with Standard Bonnet Construction and High Strength Stem**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close									
					Max ΔP	Supply pressure									Max Pressure Limits
	2 Bar (29 psi)	2.5 Bar (36 psi)				3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply			
	bar (psi)	bar (psi)				bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)			
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)		51.7 (750)			51.7 (750)	6 (87)	
			PTFE	N/A											
			225 3Bar			ULF	N/A								
			PTFE												
	9.5	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)			51.7 (750)	6 (87)			
			PTFE	N/A											
			225 3Bar			ULF	N/A								
			PTFE												
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)			51.7 (750)	6 (87)			
			PTFE	N/A											
			225 3Bar			ULF	N/A								
			PTFE												
			225 4Bar	ULF		N/A									
				PTFE											
DN25 to 50 (NPS 1 to 2)	22 <sup>(1)</sup>	20	225 2Bar	ULF	27.3 (396)	39.2 (569)	51.7 (750)	51.7 (750)			51.7 (750)	6 (87)			
			PTFE	42.0 (609)	51.7 (750)										
			225 3Bar	ULF	43.4 (629)	N/A									
			PTFE	51.7 (750)											
			225 4Bar	ULF	51.7 (750)	N/A									
				PTFE											
DN40 to 50 (NPS 1-1/2 to 2)	36 <sup>(1)</sup>	20	225 2Bar	ULF	10.2 (148)	14.6 (212)	25.3 (367)	35.9 (521)	45.3 (657)	51.7 (750)	51.7 (750)		51.7 (750)	6 (87)	
			PTFE	15.7 (750)	20.1 (292)	30.8 (447)	41.4 (600)	50.8 (737)							
			225 3Bar	ULF	16.2 (235)	N/A		25.9 (376)	35.3 (512)	47.2 (685)					
			PTFE	21.7 (315)	31.4 (455)			40.8 (592)	51.7 (750)						
			225 4Bar	ULF	28.3 (410)	N/A		N/A		47.2 (685)					
				PTFE	33.7 (489)					51.7 (750)					
			750 2Bar	ULF	48.0 (696)	33.7 (489)	51.7 (750)	51.7 (750)		---		51.7 (750)	3.5 (51)		
				PTFE	51.7 (750)	39.2 (569)									
			750 3Bar	ULF	51.7 (750)	N/A						N/A			
			PTFE												
			750 4Bar	ULF	N/A	N/A									
			PTFE												

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**Table 2. Maximum Pressure Drops with Standard Bonnet Construction and High Strength Stem (continued)**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close															
					Max ΔP	Supply pressure								Max Pressure Limits							
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply							
	mm	mm			bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)						
DN50 (NPS 2)	46 <sup>(1)</sup>	20	225 2Bar	ULF	---	9.0 (131)	15.5 (225)	22.0 (319)	27.8 (403)	35.1 (509)	48.1 (698)	51.7 (750)	51.7 (750)	6 (87)							
				PTFE		12.3 (178)	18.8 (273)	25.4 (368)	31.1 (451)	38.4 (557)	51.5 (747)										
			225 3Bar	ULF	9.9 (144)	N/A	15.9 (231)	21.6 (313)	28.9 (419)	42.0 (609)	51.7 (750)				51.7 (750)	6 (87)					
				PTFE	13.3 (193)		19.2 (278)	25.0 (363)	32.3 (468)	45.3 (657)											
			225 4Bar	ULF	17.3 (251)		N/A	28.9 (419)	42.0 (609)	51.7 (750)							51.7 (750)	6 (87)			
				PTFE	20.7 (300)			32.3 (468)	45.3 (657)												
	46	20	750 2Bar	ULF	29.4 (426)		20.7 (300)	42.4 (615)	51.7 (750)	---		51.7 (750)	3.5 (51)								
				PTFE	32.8 (476)		24.0 (348)	45.8 (664)													
			750 3Bar	ULF	46.5 (674)	N/A	N/A	N/A	N/A		N/A			N/A							
				PTFE	49.9 (724)																
			750 4Bar	ULF	46.5 (674)										N/A	N/A	N/A	N/A	N/A	N/A	
				PTFE	49.9 (724)																
	DN80 (NPS 3)	36	20	750 2Bar	ULF					46.4 (673)		32.1 (466)	51.7 (750)		51.7 (750)	51.7 (750)	51.7 (750)	6 (87)			
					PTFE					51.1 (741)		36.8 (534)	51.7 (750)								
				750 3Bar	ULF	51.7 (750)	N/A	N/A	N/A	N/A	N/A	N/A									
					PTFE																
				750 4Bar	ULF								N/A	N/A	N/A				N/A	N/A	N/A
					PTFE																
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	28.4 (412)	19.7 (286)	41.5 (602)	51.7 (750)	51.7 (750)	51.7 (750)	6 (87)										
				PTFE	31.3 (454)	22.6 (328)	44.3 (643)														
			750 3Bar	ULF	45.5 (660)	N/A	N/A	N/A				N/A	N/A	N/A							
				PTFE	48.4 (702)																
			750 4Bar	ULF	45.5 (660)										N/A	N/A	N/A	N/A	N/A	N/A	
				PTFE	48.4 (702)																
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	51.7 (750)				51.7 (750)	51.7 (750)	51.7 (750)				51.7 (750)	6 (87)					
				PTFE																	
			750 3Bar	ULF		N/A	N/A	N/A	N/A			N/A	N/A								
				PTFE																	
			750 4Bar	ULF										N/A			N/A	N/A	N/A	N/A	N/A
				PTFE																	

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# Product Bulletin

51.1:GX(S1)  
February 2012

**GX Control Valve and Actuator**  
D103209X012

**Table 2. Maximum Pressure Drops with Standard Bonnet Construction and High Strength Stem (continued)**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close											
					Max ΔP	Supply pressure								Max Pressure Limits			
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply			
	mm	mm			bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)		
DN80 -100 (NPS 3 to 4)	70	40	750 2Bar	ULF	11.5 (167)	17.2 (249)	26.6 (386)	35.9 (521)	44.2 (641)	51.7 (750)	51.7 (750)	51.7 (750)	6 (87)				
				PTFE	12.8 (186)	18.4 (267)	27.8 (403)	37.2 (540)	45.4 (658)								
			750 3Bar	ULF	23.0 (334)	N/A	N/A	35.9 (521)	44.2 (641)					36.9 (535)			
				PTFE	24.2 (351)			37.2 (540)	45.4 (658)								
			750 4Bar	ULF	31.9 (463)			N/A	N/A	38.2 (554)							
				PTFE	33.1 (480)												
	90 Bal	20	750 2Bar	ULF	51.7 (750)	46.8 (679)	51.7 (750)	51.7 (750)	51.7 (750)	51.7 (750)	6 (87)						
				PTFE		51.7 (750)											
			750 3Bar	ULF		N/A	N/A										
				PTFE													
			750 4Bar	ULF			N/A										
				PTFE													
	90	40	750 2Bar	ULF	7.0 (102)	10.4 (151)	16.1 (234)	21.7 (315)	26.7 (387)	33.1 (480)	44.4 (644)	51.7 (750)	51.7 (750)	6 (87)			
				PTFE	7.7 (112)	11.2 (162)	16.8 (244)	22.5 (326)	27.5 (399)	33.8 (490)	45.2 (656)						
			750 3Bar	ULF	N/A	21.7 (315)	26.7 (387)	33.1 (480)	44.4 (644)								
				PTFE		14.7 (213)	22.5 (326)	27.5 (399)	33.8 (490)	45.2 (656)							
			750 4Bar	ULF		N/A	22.3 (323)	33.7 (489)	45.0 (653)	45.0 (653)							
				PTFE							20.0 (290)	23.1 (335)	34.4 (499)		45.7 (663)	45.7 (663)	
			DN150 (NPS 6)	90	40	1200	ULF	26.4 (383)	N/A	18.9 (274)	26.9 (390)	37.2 (540)	---		---	51.7 (750)	4.9 (71)
							PTFE	27.8 (403)		20.3 (294)	28.4 (412)	38.7 (561)					
	136 Bal	60		1200	ULF	51.7 (750)	51.7 (750)	51.7 (750)		---	23.5 (341)	5.4 (78)					
					PTFE	51.7 (750)											
136	60	1200		ULF	8.4 (122)	4.6 (67)	8.1 (117)	12.5 (181)		20.3 (294)	24.1 (350)						
				PTFE	9.1 (132)	5.2 (75)	8.7 (126)	13.1 (190)		20.9 (303)							
1. Cavitrol™ III trim limited to 27.6 bar (400 psid) maximum pressure drop and 4 bar (58 psi) minimum supply pressure.																	

1. Cavitrol™ III trim limited to 27.6 bar (400 psid) maximum pressure drop and 4 bar (58 psi) minimum supply pressure.

**Table 3. Shutoff Classification Capability for Standard Bonnet Construction and High Strength Stem<sup>(1)</sup>**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close						
					Shutoff	Supply pressure						
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)
	Shutoff	Shutoff				Shutoff	Shutoff	Shutoff	Shutoff	Shutoff		
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	IV,V,VI <sup>(2)</sup>	IV,V,VI		IV,V,VI		IV,V,VI		
			PTFE	IV,V,VI	N/A							
			225 3Bar			ULF	N/A					
			PTFE									
			225 4Bar		ULF	N/A						
	PTFE											
	9.5	20	225 2Bar	ULF	IV,V <sup>(2)</sup>	IV,V,VI <sup>(2)</sup>	IV,V,VI	IV,V,VI	IV,V,VI			
			PTFE	IV,V,VI <sup>(2)</sup>	IV,V,VI							
			225 3Bar		ULF	N/A	IV,V,VI <sup>(2)</sup>					
			PTFE		IV,V,VI							
225 4Bar			ULF		IV,V,VI		N/A					
PTFE												
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	IV	IV,V <sup>(2)</sup>	IV,V,VI <sup>(2)</sup>	IV,V,VI	IV,V,VI	IV,V,VI		
			PTFE	IV,V <sup>(2)</sup>	IV,V,VI	IV,V,VI						
			225 3Bar	ULF	N/A	IV,V,VI <sup>(2)</sup>						
			PTFE	N/A								
			225 4Bar	ULF		IV,V,VI <sup>(2)</sup>	N/A					
PTFE												
DN25 to 50 (NPS 1 to 2)	22	20	225 2Bar	ULF	IV,VI	IV,VI	IV,V <sup>(2)</sup> ,VI	IV,V,VI	IV,V,VI	IV,V,VI		
			PTFE	IV,V <sup>(2)</sup> ,VI		IV,V,VI						
			225 3Bar	ULF	N/A		IV,V <sup>(2)</sup> ,VI	IV,V,VI				
			PTFE	IV,V <sup>(2)</sup> ,VI			N/A					
			225 4Bar						ULF		IV,V,VI	N/A
PTFE												
DN40 to 50 (NPS 1-1/2 to 2)	36	20	225 2Bar	ULF	IV <sup>(2)</sup> ,VI	IV <sup>(2)</sup> ,VI		IV,VI	IV,V <sup>(2)</sup> ,VI	IV,V,VI	IV,V,VI	
			PTFE	IV,VI		IV,V <sup>(2)</sup> ,VI						
			225 3Bar	ULF	IV,VI	N/A	IV,VI	IV,V <sup>(2)</sup> ,VI		IV,V,VI		
			PTFE	IV,V <sup>(2)</sup> ,VI								
			225 4Bar	ULF			IV,V <sup>(2)</sup> ,VI		N/A			
			PTFE									
			750 2Bar	ULF	IV,V <sup>(2)</sup> ,VI	IV,V <sup>(2)</sup> ,VI	IV,V,VI	IV,V,VI	---			
			PTFE	IV,V,VI	N/A	IV,V,VI						
			750 3Bar				ULF			N/A		
			PTFE									
			750 4Bar		ULF	IV,V,VI	N/A					
			PTFE									
DN50 (NPS 2)	46	20	225 2Bar	ULF	---	IV <sup>(2)</sup> ,VI	IV,VI	IV,VI	IV,V <sup>(2)</sup> ,VI	IV,V <sup>(2)</sup> ,VI	IV,V,VI	IV,V,VI
			PTFE	IV <sup>(2)</sup> ,VI	N/A	IV,V <sup>(2)</sup> ,VI	IV,V <sup>(2)</sup> ,VI	IV,V <sup>(2)</sup> ,VI				
			225 3Bar			ULF	IV,VI	IV,VI	IV,V <sup>(2)</sup> ,VI			
			PTFE	N/A		IV,V <sup>(2)</sup> ,VI		IV,V <sup>(2)</sup> ,VI				
			225 4Bar	ULF	IV,VI	N/A		IV,V,VI	IV,V,VI	---		
			PTFE	IV,V <sup>(2)</sup> ,VI	IV,V <sup>(2)</sup> ,VI	IV,V,VI						
			750 2Bar				ULF		IV,VI		IV,V <sup>(2)</sup> ,V <sup>(2)</sup> I	IV,V,VI
			PTFE				IV,V <sup>(2)</sup> ,VI	IV,V,VI				
			750 3Bar	ULF	IV,V,VI	N/A	N/A	---				
			PTFE									
			750 4Bar	ULF					IV,V,VI	N/A		
			PTFE									

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Table 3. Shutoff Classification Capability for Standard Bonnet Construction and High Strength Stem<sup>(1)</sup> (continued)

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close						
					Shutoff	Supply pressure						
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)
						Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff
DN80 (NPS 3)	36	20	750 2Bar	ULF	IV,V(2),VI	IV,V(2),VI	IV,V,VI	IV,V,VI				
			PTFE									
			750 3Bar	ULF	IV,V,VI	N/A						
			PTFE									
750 4Bar	ULF		N/A									
PTFE												
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	IV,V(2),VI	IV,VI	IV,V(2),VI	IV,V,VI	IV,V,VI			
			PTFE	IV,V,VI								
			750 3Bar	ULF	N/A							
			PTFE									
750 4Bar	ULF		N/A									
PTFE												
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	IV	IV		IV	IV			
			PTFE									
			750 3Bar	ULF		N/A						
			PTFE									
750 4Bar	ULF		N/A									
PTFE												
DN80 -100 (NPS 3 to 4)	70	40	750 2Bar	ULF	IV,VI	IV,V(2),VI		IV,V,VI	IV,V,VI			
			PTFE									
			750 3Bar	ULF	IV,V(2),VI	N/A						
			PTFE									
750 4Bar	ULF	IV,V,VI	N/A									
PTFE												
DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	IV	IV(2)	IV	IV	IV			
			PTFE									
			750 3Bar	ULF		N/A						
			PTFE									
	750 4Bar	ULF		N/A								
	PTFE											
	90	40	750 2Bar	ULF	IV(2),VI	IV,VI	IV,V(2),VI	IV,V(2),VI	IV,V,VI	IV,V,VI		
			PTFE									
750 3Bar			ULF	IV,V(2),VI	N/A							
PTFE												
750 4Bar	ULF		N/A	IV,V(2),VI								
PTFE												
DN150 (NPS 6)	90	40	1200	ULF	IV,V,VI	N/A	IV,V(2),VI	IV,V,VI		---	---	
			1200	PTFE								
	136 Bal	60	1200	ULF	IV		IV(2)	IV				
			1200	PTFE								
	136	60	1200	ULF	IV,VI		VI	IV,VI	IV,V(2),VI	IV,V,VI		
				PTFE								

1. CLVI shutoff is achieved through the use of a soft seat in ports greater than or equal to 22mm.

2. Shutoff classification not available on hard-faced trim.

1. CLVI shutoff is achieved through the use of a soft seat in ports greater than or equal to 22mm.

2. Shutoff classification not available on hard-faced trim.

Table 4 contains information regarding the maximum pressure drop capability of the GX with an extension or bellows bonnet and S31603 trim. Maximum pressure

drop is calculated at the maximum supply pressure for each construction. The allowable leakage classes are given in table 5.

**Table 4. Maximum Pressure Drops with Extension/Bellows Bonnet Construction with High Strength Stem**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close										
					Max ΔP	Supply pressure										Max Pressure Limits
	2 Bar (29 psi)	2.5 Bar (36 psi)				3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply				
	bar (psi)	bar (psi)				bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)				
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)		51.7 (750)		---	51.7 (750)	5.6 (81)		
			225 3Bar	PTFE		N/A						51.7 (750)		6 (87)		
			225 4Bar	ULF				N/A				51.7 (750)		6 (87)		
			225 4Bar	PTFE		51.7 (750)	6 (87)									
	9.5	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)		---	51.7 (750)	5.6 (81)				
			225 3Bar	PTFE		N/A				51.7 (750)		6 (87)				
			225 4Bar	ULF				N/A		51.7 (750)		6 (87)				
			225 4Bar	PTFE		51.7 (750)	6 (87)									
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)		---	51.7 (750)	5.6 (81)				
			225 3Bar	PTFE		N/A				51.7 (750)		6 (87)				
			225 4Bar	ULF				N/A		51.7 (750)		6 (87)				
			225 4Bar	PTFE		51.7 (750)	6 (87)									
DN25 to 50 (NPS 1 to 2)	22	20	225 2Bar	ULF	27.3 (396)	39.2 (569)	51.7 (750)	51.7 (750)		51.7 (750)		---	51.7 (750)	5.6 (81)		
			225 2Bar	PTFE	42.0 (609)	51.7 (750)						51.7 (750)		6 (87)		
			225 3Bar	ULF	43.4 (629)	N/A		51.7 (750)				51.7 (750)		6 (87)		
			225 3Bar	PTFE	51.7 (750)							51.7 (750)		6 (87)		
			225 4Bar	ULF	51.7 (750)	N/A		N/A		51.7 (750)	6 (87)					
			225 4Bar	PTFE	51.7 (750)					51.7 (750)	6 (87)					
DN40 to 50 (NPS 1-1/2 to 2)	36	20	225 2Bar	ULF	10.2 (148)	14.6 (212)	25.3 (367)	35.9 (521)	45.3 (657)	51.7 (750)	51.7 (750)	---	51.7 (750)	5.6 (81)		
			225 2Bar	PTFE	15.7 (228)	20.1 (292)	30.8 (447)	41.4 (600)	50.8 (737)			51.7 (750)		6 (87)		
			225 3Bar	ULF	16.2 (235)	N/A		25.9 (376)	35.3 (512)	47.2 (685)		51.7 (750)		51.7 (750)	51.7 (750)	6 (87)
			225 3Bar	PTFE	21.7 (315)			31.4 (455)	40.8 (592)	51.7 (750)						
			225 4Bar	ULF	28.3 (410)			N/A		47.2 (685)						
			225 4Bar	PTFE	33.7 (489)					51.7 (750)						
			750 2Bar	ULF	48.0 (696)	33.7 (489)	51.7 (750)	---		---			51.7 (750)	2.8 (41)		
			750 2Bar	PTFE	39.2 (569)											
			750 3Bar	ULF	51.7 (750)	N/A		N/A		---			N/A			
			750 3Bar	PTFE												
			750 4Bar	ULF												
			750 4Bar	PTFE												

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Table 4. Maximum Pressure Drops with Extension/Bellows Bonnet Construction with High Strength Stem  
(continued)

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close									
					Max ΔP	Supply pressure								Max Pressure Limits	
	2 Bar (29 psi)	2.5 Bar (36 psi)				3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply			
	bar (psi)	bar (psi)				bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)			
DN50 (NPS 2)	46	20	225 2Bar	ULF	---	9.0 (131)	15.5 (225)	22.0 (319)	27.8 (403)	35.1 (509)	48.1 (698)	---	51.7 (750)	5.6 (81)	
				PTFE		12.3 (178)	18.8 (273)	25.4 (368)	31.1 (451)	38.4 (557)	51.5 (747)				
			225 3Bar	ULF	9.9 (144)	N/A	15.9 (231)	21.6 (313)	28.9 (419)	42.0 (609)	51.7 (750)	51.7 (750)		6 (87)	
				PTFE	13.3 (193)		19.2 (278)	25.0 (363)	32.3 (468)	45.3 (657)					
			225 4Bar	ULF	17.3 (251)		N/A	28.9 (419)	42.0 (609)						
				PTFE	20.7 (300)			32.3 (468)	45.3 (657)						
			750 2Bar	ULF	29.4 (426)		20.7 (300)	42.4 (615)	---	51.7 (750)			2.8 (41)		
				PTFE	32.8 (476)		24.0 (348)	45.8 (664)							
			750 3Bar	ULF	46.5 (674)	N/A	---	N/A	N/A						
				PTFE	49.9 (724)										
			750 4Bar	ULF	46.5 (674)						N/A				
				PTFE	49.9 (724)										
DN80 (NPS 3)	36	20	750 2Bar	ULF	46.4 (673)	32.1 (466)				51.7 (750)	---	51.7 (750)	3.9 (57)		
				PTFE	51.1 (741)	36.8 (534)									
			750 3Bar	ULF	51.7 (750)	N/A	N/A	N/A							
				PTFE											
			750 4Bar	ULF	N/A										
				PTFE											
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	28.4 (412)	19.7 (286)	41.5 (602)		51.7 (750)	---	51.7 (750)	3.9 (57)			
				PTFE	31.3 (454)	22.6 (328)	44.3 (643)								
			750 3Bar	ULF	45.5 (660)	N/A	N/A	N/A							
				PTFE	48.4 (702)										
			750 4Bar	ULF	45.5 (660)				N/A						
				PTFE	48.4 (702)										
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	51.7 (750)	51.7 (750)			51.7 (750)	---	51.7 (750)	3.9 (57)			
				PTFE											
			750 3Bar	ULF		N/A	N/A	N/A							
				PTFE											
			750 4Bar	ULF					N/A						
				PTFE											

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**Table 4. Maximum Pressure Drops with Extension/Bellows Bonnet Construction with High Strength Stem (continued)**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close										
					Max ΔP	Supply pressure								Max Pressure Limits		
	2 Bar (29 psi)	2.5 Bar (36 psi)				3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply				
	bar (psi)	bar (psi)				bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)				
DN80 -100 (NPS 3 to 4)	70	40	750 2Bar	ULF	11.5 (167)	17.2 (249)	26.6 (386)	35.9 (521)	44.2 (641)	---	---	45.1 (654)	3.5 (51)			
				PTFE	12.8 (186)	18.4 (267)	27.8 (403)	37.2 (540)	45.4 (658)			46.4 (673)				
			750 3Bar	ULF	23.0 (334)	N/A		35.9 (521)	44.2 (641)			45.1 (654)				
				PTFE	24.2 (351)			37.2 (540)	45.4 (658)			46.4 (673)				
			750 4Bar	ULF	31.9 (463)			N/A		36.9 (535)	44.4 (644)	4.4 (64)				
				PTFE	33.1 (480)					38.2 (554)	45.6 (661)					
			DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	51.7 (750)	46.8 (679)	51.7 (750)	51.7 (750)		---	---	51.7 (750)	3.9 (57)
							PTFE		51.7 (750)							
750 3Bar	ULF	N/A				N/A			N/A							
	PTFE															
750 4Bar	ULF	N/A				N/A			N/A							
	PTFE															
90	40	750 2Bar				ULF	7.0 (102)	10.4 (151)	16.1 (234)	21.7 (315)	26.7 (387)	---	---	27.3 (396)	3.5 (51)	
						PTFE	7.7 (112)	11.2 (162)	16.8 (244)	22.5 (326)	27.5 (399)			28.0 (406)		
		750 3Bar		ULF	13.9 (202)	N/A		21.7 (315)	26.7 (387)	27.3 (396)						
				PTFE	14.7 (213)			22.5 (326)	27.5 (399)	28.0 (406)						
		750 4Bar		ULF	19.3 (280)			N/A		22.3 (323)	26.9 (390)	4.4 (64)				
				PTFE	20.0 (290)					23.1 (335)	27.6 (400)					

Table 5. Shutoff Classification Capability for Extension / Bellows Bonnet Construction and High Strength Stem<sup>(1)</sup>

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close								
					Shutoff	Supply pressure								
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)		
						Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff		
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	IV,V,VI <sup>(2)</sup>	IV,V,VI		IV,V,VI		IV,V,VI		---		
			PTFE	IV,V,VI								N/A		IV,V,VI
			225 3Bar		ULF	N/A	IV,V,VI							
			PTFE		N/A									
			225 4Bar					ULF	PTFE					
	9.5	20	225 2Bar	ULF	IV,V <sup>(2)</sup>	IV,V,VI <sup>(2)</sup>		IV,V,VI	IV,V,VI	---				
			PTFE	IV,V,VI <sup>(2)</sup>			IV,V,VI			IV,V,VI				
			225 3Bar		ULF	N/A		IV,V,VI <sup>(2)</sup>			IV,V,VI			
			PTFE		N/A							IV,V,VI		
			225 4Bar					ULF	PTFE					
	DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	IV	IV,V <sup>(2)</sup>	IV,V,VI <sup>(2)</sup>	IV,V,VI	IV,V,VI			---	
				PTFE	IV,V <sup>(2)</sup>						N/A		IV,V,VI <sup>(2)</sup>	IV,V,VI
225 3Bar				ULF		IV,V,VI <sup>(2)</sup>	N/A	IV,V,VI						
PTFE				N/A	IV,V,VI									
225 4Bar							ULF		PTFE					
DN25 to 50 (NPS 1 to 2)				22		20	225 2Bar		ULF	IV,VI	IV,V <sup>(2)</sup> ,VI	IV,V,VI	IV,V,VI	IV,V,VI
	PTFE	N/A	IV,V <sup>(2)</sup> ,VI				IV,V,VI							
	225 3Bar				ULF			N/A	IV,V <sup>(2)</sup> ,VI	IV,V,VI				
	PTFE				N/A						IV,V,VI			
	225 4Bar								ULF			PTFE		
	DN40 to 50 (NPS 1-1/2 to 2)	36	20		225 2Bar		ULF	IV <sup>(2)</sup> ,VI	IV,VI			IV,V <sup>(2)</sup> ,VI	IV,V <sup>(2)</sup> ,VI	IV,V,VI
PTFE				IV <sup>(2)</sup> ,VI	IV,V <sup>(2)</sup> ,VI	IV,V,VI	IV,V,VI							
225 3Bar								ULF	N/A	IV,VI	IV,V <sup>(2)</sup> ,VI	IV,V,VI		
PTFE								N/A					IV,V <sup>(2)</sup> ,VI	IV,V,VI
225 4Bar										ULF				
PTFE				IV,V <sup>(2)</sup> ,VI <sup>(2)</sup>	IV,V <sup>(2)</sup> ,VI	IV,V,VI								
750 2Bar							ULF	IV,V,VI	N/A	---				
PTFE				N/A	N/A									
750 3Bar							ULF		N/A		N/A	---		
PTFE				N/A		N/A								
750 4Bar							ULF	N/A		N/A	---			
PTFE				N/A	N/A									
DN50 (NPS 2)	46	20	225 2Bar				ULF		---	IV <sup>(2)</sup> ,VI		IV,VI	IV,VI	IV,V <sup>(2)</sup> ,VI
			PTFE	IV <sup>(2)</sup> ,VI		N/A	IV,VI	IV,V <sup>(2)</sup> ,VI	IV,V,VI					
			225 3Bar							ULF	IV,VI	IV,VI	IV,V <sup>(2)</sup> ,VI	IV,V,VI
			PTFE		N/A		IV,V <sup>(2)</sup> ,VI	IV,V,VI						
			225 4Bar							ULF		IV,V <sup>(2)</sup> ,VI		
			PTFE	IV,V,VI	N/A	IV,V,VI								
			750 2Bar						ULF	IV,V <sup>(2)</sup> ,VI	IV,VI		IV,V <sup>(2)</sup> ,VI	---
			PTFE	N/A	N/A									
			750 3Bar				ULF	N/A	N/A		---			
			PTFE	N/A		N/A								
			750 4Bar				ULF		N/A	N/A		---		
			PTFE	N/A	N/A									

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**Table 5. Shutoff Classification Capability for Extension / Bellows Bonnet Construction and High Strength Stem<sup>(1)</sup>**  
(continued)

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close						
					Shutoff	Supply pressure						
	mm	mm				2 Bar (29 psi) Shutoff	2.5 Bar (36 psi) Shutoff	3 Bar (44 psi) Shutoff	3.44 Bar (50 psi) Shutoff	4 Bar (58 psi) Shutoff	5 Bar (72 psi) Shutoff	6 Bar (87 psi) Shutoff
DN80 (NPS 3)	36	20	750 2Bar	ULF	IV,V(2),VI	IV,V(2),VI	IV,V,VI	IV,V,VI	---			
			PTFE									
			750 3Bar	ULF	IV,V,VI	N/A						
			PTFE									
			750 4Bar	ULF			N/A					
PTFE												
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	IV,V(2),VI	IV,VI	IV,V(2),VI	IV,V,VI	---			
			PTFE	IV,V,VI								
			750 3Bar	ULF	IV,V,VI	N/A	N/A					
			PTFE									
			750 4Bar	ULF				N/A				
PTFE												
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	IV	IV		IV	---			
			PTFE	N/A								
			750 3Bar			ULF	N/A					
			PTFE									
			750 4Bar	ULF	PTFE							
DN80 -100 (NPS 3 to 4)	70	40	750 2Bar	ULF	IV,VI	IV,V(2),VI		IV,V,VI	---	---		
			PTFE	N/A								
			750 3Bar		ULF	IV,V(2),VI	N/A		IV,V,VI			
			PTFE									
			750 4Bar	ULF	PTFE							
DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	IV	IV(2)	IV	IV	---			
			PTFE	N/A								
			750 3Bar			ULF	N/A					
			PTFE									
	750 4Bar	ULF	PTFE	N/A								
	90	40	750 2Bar		ULF	IV(2),VI	IV,VI	IV,V(2),VI	IV,V(2),VI	IV,V,VI	---	
			PTFE		IV,V(2),VI							N/A
			750 3Bar	ULF		N/A						
PTFE												
750 4Bar	ULF	PTFE										

1. CLVI shutoff is achieved through the use of a soft seat in ports greater than or equal to 22mm.

2. Shutoff classification not available on hard-faced trim.

1. CLVI shutoff is achieved through the use of a soft seat in ports greater than or equal to 22mm.  
2. Shutoff classification not available on hard-faced trim.

Table 6 contains information regarding the maximum pressure drop capability of the GX with a standard bonnet and CW2M trim. Maximum pressure drop is

calculated at the maximum supply pressure for each construction. The allowable leakage classes are given in table 7.

**Table 6. Maximum Pressure Drops with Standard Bonnet Construction and Low Strength Stem**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close									
						Supply pressure								Max Pressure Limits	
						Max ΔP	2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply
						bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	51.7 (750)	51.7 (750)	N/A	N/A	N/A	51.7 (750)	51.7 (750)	---	51.7 (750)	4.1 (59)	4.6 (67)
				PTFE											
			225 3Bar	ULF											
				PTFE											
	9.5	20	225 4Bar	ULF	51.7 (750)	51.7 (750)	N/A	N/A	N/A	51.7 (750)	51.7 (750)	---	51.7 (750)	4.1 (59)	4.6 (67)
				PTFE											
			225 2Bar	ULF											
				PTFE											
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	51.7 (750)	51.7 (750)	N/A	N/A	N/A	51.7 (750)	51.7 (750)	---	51.7 (750)	4.1 (59)	4.6 (67)
				PTFE											
			225 3Bar	ULF											
				PTFE											
DN25 to 50 (NPS 1 to 2)	22	20	225 2Bar	ULF	51.7 (750)	51.7 (750)	N/A	N/A	N/A	51.7 (750)	51.7 (750)	---	51.7 (750)	4.1 (59)	4.6 (67)
				PTFE											
			225 3Bar	ULF											
				PTFE											
			225 4Bar	ULF											
				PTFE											
DN40 to 50 (NPS 1-1/2 to 2)	36	20	225 2Bar	ULF	51.7 (750)	51.7 (750)	N/A	N/A	N/A	51.7 (750)	51.7 (750)	---	51.7 (750)	4.1 (59)	4.6 (67)
				PTFE											
			225 3Bar	ULF											
				PTFE											
			225 4Bar	ULF											
				PTFE											
			225 2Bar	ULF											
				PTFE											

-continued-

**Table 6. Maximum Pressure Drops with Standard Bonnet Construction and Low Strength Stem (continued)**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close									
					Max ΔP	Supply pressure									Max Pressure Limits
	2 Bar (29 psi)	2.5 Bar (36 psi)				3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply			
	bar (psi)	bar (psi)				bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)			
DN40 to 50 (NPS 1-1/2 to 2)	36	20	750 2Bar	ULF	48.0 (696)	33.7 (489)	---	---	---	---	---	51.7 (750)	2.3 (33)		
				PTFE	51.7 (750)	39.2 (569)									
			750 3Bar	ULF	48.0 (696)	N/A	N/A	N/A							
				PTFE	51.7 (750)										
			750 4Bar	ULF	48.0 (696)										
				PTFE	51.7 (750)										
DN50 (NPS 2)	46	20	225 2Bar	ULF	---	9.0 (131)	15.5 (225)	22.0 (319)	27.8 (403)	35.1 (509)	---	36.4 (528)	4.1 (59)		
				PTFE		12.3 (178)	18.8 (273)	25.4 (368)	31.1 (451)	38.4 (557)		39.7 (576)			
			225 3Bar	ULF	9.9 (144)	N/A	15.9 (231)	21.6 (313)	28.9 (419)	36.7 (532)	4.6 (67)				
				PTFE	13.3 (193)		19.2 (278)	25.0 (363)	32.3 (468)	40.1 (582)					
			225 4Bar	ULF	17.3 (251)		N/A	28.9 (419)	36.7 (532)						
				PTFE	20.7 (300)			32.3 (468)	40.1 (582)						
			750 2Bar	ULF	29.4 (426)	20.7 (300)	---	---	---	---	33.7 (489)	2.3 (33)			
				PTFE	32.8 (476)	24.0 (348)					37.1 (538)				
			750 3Bar	ULF	29.4 (426)	N/A	N/A	N/A							
				PTFE	32.8 (476)										
			750 4Bar	ULF	29.4 (426)										
				PTFE	32.8 (476)										
DN80 (NPS 3)	36	20	750 2Bar	ULF	46.4 (673)	32.1 (466)	51.7 (750)	51.7 (750)	---	51.7 (750)	51.7 (750)	51.7 (750)	3.9 (57)		
				PTFE	51.1 (741)	36.8 (534)	51.7 (750)								
			750 3Bar	ULF	46.4 (673)	N/A	N/A	N/A							
				PTFE	51.1 (741)										
			750 4Bar	ULF	46.4 (673)										
				PTFE	51.1 (741)										

-continued-

Table 6. Maximum Pressure Drops with Standard Bonnet Construction and Low Strength Stem (continued)

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close									
					Max ΔP	Supply pressure									Max Pressure Limits
	2 Bar (29 psi)	2.5 Bar (36 psi)				3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply			
	bar (psi)	bar (psi)				bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)			
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	28.4 (412)	19.7 (286)	41.5 (602)	51.7 (750)	---	---	51.7 (750)	3.9 (57)			
				PTFE	31.3 (454)	22.6 (328)	44.3 (643)								
			750 3Bar	ULF	28.4 (412)	N/A	N/A								
				PTFE	31.3 (454)										
			750 4Bar	ULF	28.4 (412)			N/A							
				PTFE	31.3 (454)										
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	---	---	51.7 (750)	3.9 (57)			
				PTFE		N/A									
			750 3Bar	ULF			N/A								
				PTFE											
			750 4Bar	ULF			N/A								
				PTFE											
DN80 -100 (NPS 3 to 4)	70	40	750 2Bar	ULF	11.5 (167)	17.2 (249)	26.6 (386)	35.9 (521)	44.2 (641)	---	---	44.2 (641)	3.44 (50)		
				PTFE	12.8 (186)	18.4 (267)	27.8 (403)	37.2 (540)	45.4 (658)			45.4 (658)			
			750 3Bar	ULF	23.0 (334)	N/A	35.9 (521)	44.2 (641)	44.2 (641)						
				PTFE	24.2 (351)		37.2 (540)	45.4 (658)	45.4 (658)						
			750 4Bar	ULF	23.0 (334)		N/A	36.9 (535)	42.5 (616)	4.3 (62)					
				PTFE	24.2 (351)			38.2 (554)	43.8 (635)						
DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	51.7 (750)	46.8 (679)	51.7 (750)	51.7 (750)	---	---	---	51.7 (750)	3.9 (57)		
				PTFE		51.7 (750)	51.7 (750)								
			750 3Bar	ULF		N/A	N/A								
				PTFE											
			750 4Bar	ULF				N/A							
				PTFE											
	90	40	750 2Bar	ULF	7.0 (102)	10.4 (151)		16.1 (234)	21.7 (315)	26.7 (387)	---	---	26.7 (387)	3.44 (50)	
				PTFE	7.7 (112)	11.2 (162)		16.8 (244)	22.5 (326)	27.5 (399)			27.5 (399)		
			750 3Bar	ULF	13.9 (202)	N/A	21.7 (315)	26.7 (387)	26.7 (387)						
				PTFE	14.7 (213)		22.5 (326)	27.5 (399)	27.5 (399)						
			750 4Bar	ULF	13.9 (202)		N/A	N/A	22.3 (323)	25.7 (373)	4.3 (62)				
				PTFE	14.7 (213)				23.1 (335)	26.5 (384)					

**Table 7. Shutoff Classification Capability for Standard Bonnet Construction and Low Strength Stem<sup>(1)</sup>**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open		Air to Close						
					Shutoff	Supply pressure							
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	
	Shutoff	Shutoff				Shutoff	Shutoff	Shutoff	Shutoff	Shutoff			
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	IV,V,VI	IV,V,VI		IV,V,VI		IV,V,VI	---		
			PTFE	N/A									
			225 3Bar			ULF	N/A						
			PTFE										
	225 4Bar	ULF	IV,V	IV,V,VI		IV,V,VI		IV,V,VI	---				
	PTFE	N/A											
	225 3Bar			ULF	N/A								
	PTFE												
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	IV	IV,V		IV,V,VI		IV,V,VI	---		
			PTFE	IV,V									
			225 3Bar	ULF	IV,V,VI	N/A							
			PTFE										
DN25 to 50 (NPS 1 to 2)	22	20	225 2Bar	ULF	IV,VI	IV,VI	IV,V,VI	IV,V,VI		IV,V,VI	---		
			PTFE	IV,V,VI									
			225 3Bar	ULF	IV,V,VI	N/A							
			PTFE										
DN40 to 50 (NPS 1-1/2 to 2)	36	20	225 2Bar	ULF	IV,VI	IV,VI	IV,VI	IV,V,VI	IV,V,VI	IV,V,VI	---		
			PTFE	IV,V,VI									
			225 3Bar	ULF		N/A		IV,VI	IV,V,VI				
			PTFE										
			225 4Bar	ULF	IV,V,VI	N/A							
			PTFE										
			750 2Bar	ULF	IV,V,VI	IV,V,VI	---	---		---	---		
			PTFE	N/A									
			750 3Bar			ULF	N/A						
			PTFE										
750 4Bar	ULF	N/A											
PTFE													
DN50 (NPS 2)	46	20	225 2Bar	ULF	---	IV,VI		IV,VI	IV,V,VI	IV,V,VI	---		
			PTFE	IV,V,VI									
			225 3Bar	ULF	IV,VI	N/A		IV,VI	IV,V,VI				
			PTFE										
			225 4Bar	ULF	IV,V,VI	N/A							
			PTFE										
			750 2Bar	ULF	IV,V,VI	IV,VI	---	---		---	---		
			PTFE	IV,V,VI									
			750 3Bar	ULF		N/A							
			PTFE										
750 4Bar	ULF	N/A											
PTFE													

-continued-

Table 7. Shutoff Classification Capability for Standard Bonnet Construction and Low Strength Stem<sup>(1)</sup> (continued)

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close						
					Shutoff	Supply pressure						
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)
	Shutoff	Shutoff				Shutoff	Shutoff	Shutoff	Shutoff	Shutoff		
DN80 (NPS 3)	36	20	750 2Bar	ULF	IV,V,VI	IV,V,VI		IV,V,VI		---		
			750 3Bar	PTFE		N/A						
			750 4Bar	ULF				N/A				
				PTFE								
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	IV,V,VI	IV,VI	IV,V,VI	IV,V,VI		---		
			750 3Bar	PTFE		N/A						
			750 4Bar	ULF				N/A				
				PTFE								
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	IV	IV		IV		---		
			750 3Bar	PTFE		N/A						
			750 4Bar	ULF				N/A				
				PTFE								
DN80 -100 (NPS 3 to 4)	70	40	750 2Bar	ULF	IV,VI	IV,V,VI		IV,V,VI		---	---	
			750 3Bar	PTFE	IV,V,VI	N/A				IV,V,VI		
			750 4Bar	ULF				N/A		IV,V,VI		
				PTFE								
DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	IV	IV		IV		---		
			750 3Bar	PTFE		N/A						
			750 4Bar	ULF				N/A				
				PTFE								
	90	40	750 2Bar	ULF	IV,VI	IV,VI	IV,V,VI	IV,V,VI				
			750 3Bar	PTFE	IV,V,VI	N/A				IV,V,VI		
			750 4Bar	ULF				N/A		IV,V,VI		
				PTFE								

1. CLVI shutoff is achieved through the use of a soft seat in ports greater than or equal to 22mm.

1. CLVI shutoff is achieved through the use of a soft seat in ports greater than or equal to 22mm.



Table 8 contains information regarding the maximum pressure drop capability of the GX with a bellows bonnet and CW2M trim. Maximum pressure drop is

calculated at the maximum supply pressure for each construction. The allowable leakage classes are given in table 9.

**Table 8. Maximum Pressure Drops with Bellows Bonnet Construction and Low Strength Stem**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close											
					Max ΔP	Supply pressure								Max Pressure Limits			
	2 Bar (29 psi)	2.5 Bar (36 psi)				3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply					
	mm	mm			bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)				
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)		---	---	51.7 (750)	3.7 (54)				
			225 3Bar	PTFE		N/A				51.7 (750)			4.1 (59)				
			225 4Bar	ULF				N/A		51.7 (750)			---	51.7 (750)	4.1 (59)		
			225 4Bar	PTFE		N/A										51.7 (750)	---
	9.5	20	225 2Bar	ULF	51.7 (750)			51.7 (750)		51.7 (750)		---	---	51.7 (750)	3.7 (54)		
			225 3Bar	PTFE		N/A		51.7 (750)	4.1 (59)								
			225 4Bar	ULF				N/A		51.7 (750)	---	51.7 (750)			4.1 (59)		
			225 4Bar	PTFE		N/A										51.7 (750)	---
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	51.7 (750)			51.7 (750)		51.7 (750)		---	---	51.7 (750)	3.7 (54)		
			225 3Bar	PTFE		N/A		51.7 (750)	4.1 (59)								
			225 4Bar	ULF				N/A		51.7 (750)	---	51.7 (750)			4.1 (59)		
			225 4Bar	PTFE		N/A										51.7 (750)	---
DN25 to 50 (NPS 1 to 2)	22	20	225 2Bar	ULF	27.3 (396)			39.2 (569)	51.7 (750)	51.7 (750)		---	---	51.7 (750)	3.7 (54)		
			225 2Bar	PTFE	42.0 (609)	51.7 (750)	51.7 (750)	4.1 (59)									
			225 3Bar	ULF	43.4 (629)	N/A		51.7 (750)		51.7 (750)	---	51.7 (750)			4.1 (59)		
			225 3Bar	PTFE	51.7 (750)											N/A	
			225 4Bar	ULF	51.7 (750)	N/A		N/A		51.7 (750)	---	51.7 (750)			4.1 (59)		
			225 4Bar	PTFE	51.7 (750)											N/A	
DN40 to 50 (NPS 1-1/2 to 2)	36	20	225 2Bar	ULF	10.2 (148)	14.6 (212)	25.3 (367)	35.9 (521)	45.3 (657)	---	---	50.9 (738)	3.7 (54)				
			225 2Bar	PTFE	15.7 (228)	20.1 (292)	30.8 (447)	41.4 (600)	50.8 (737)			51.7 (750)		51.7 (750)			
			225 3Bar	ULF	16.2 (235)	N/A			25.9 (376)	35.3 (512)		47.2 (685)	49.3 (715)	4.1 (59)			
			225 3Bar	PTFE	21.7 (315)				31.4 (455)	40.8 (592)		51.7 (750)			51.7 (750)		
			225 4Bar	ULF	28.3 (410)	N/A			N/A			47.2 (685)	49.3 (715)				
				225 4Bar	PTFE							33.7 (489)	N/A		51.7 (750)	51.7 (750)	

-continued-

Table 8. Maximum Pressure Drops with Bellows Bonnet Construction and Low Strength Stem (continued)

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close											
					Max ΔP	Supply pressure								Max Pressure Limits			
	2 Bar (29 psi)	2.5 Bar (36 psi)				3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply					
	bar (psi)	bar (psi)				bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)					
DN40 to 50 (NPS 1-1/2 to 2)	36	20	750 2Bar	ULF	48.0 (696)	33.7 (489)	---	---	---	---	47.9 (695)	2.2 (32)					
				PTFE	51.7 (750)	39.2 (569)					51.7 (750)						
			750 3Bar	ULF	48.0 (696)	N/A	N/A				N/A						
				PTFE	51.7 (750)												
			750 4Bar	ULF	48.0 (696)												
				PTFE	51.7 (750)												
DN50 (NPS 2)	46	20	225 2Bar	ULF	---	9.0 (131)		15.5 (225)	22.0 (319)	27.8 (403)		---	---	31.2 (453)	3.7 (54)		
				PTFE		12.3 (178)		18.8 (273)	25.4 (368)	31.1 (451)				34.5 (500)			
			225 3Bar	ULF	9.9 (144)	N/A	15.9 (231)	21.6 (313)	28.9 (419)	30.2 (438)	4.1 (59)						
				PTFE	13.3 (193)		19.2 (278)	25.0 (363)	32.3 (468)	33.6 (487)							
			225 4Bar	ULF	17.3 (251)		N/A	28.9 (419)	30.2 (438)								
				PTFE	20.7 (300)			32.3 (468)	33.6 (487)								
			750 2Bar	ULF	29.4 (426)	20.7 (300)	---	---	---	29.4 (426)	2.2 (32)						
				PTFE	32.8 (476)	24.0 (348)				32.7 (474)							
			750 3Bar	ULF	29.4 (426)	N/A	N/A			---	N/A						
				PTFE	32.8 (476)												
			750 4Bar	ULF	29.4 (426)												
				PTFE	32.8 (476)												
			DN80 (NPS 3)	36	20	750 2Bar		ULF	46.4 (673)			32.1 (466)	51.7 (750)	---	---	51.7 (750)	3.2 (46)
								PTFE	51.1 (741)			36.8 (534)					
						750 3Bar	ULF	46.4 (673)	N/A	N/A	N/A						
							PTFE	51.1 (741)									
						750 4Bar	ULF	46.4 (673)									
							PTFE	51.1 (741)									

-continued-

**Table 8. Maximum Pressure Drops with Bellows Bonnet Construction and Low Strength Stem (continued)**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close													
					Max ΔP	Supply pressure								Max Pressure Limits					
	2 Bar (29 psi)	2.5 Bar (36 psi)				3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)	ΔP	Supply							
	bar (psi)	bar (psi)				bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)	bar (psi)							
DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	28.4 (412)	19.7 (286)	41.5 (602)	51.7 (750)	---			51.7 (750)	3.2 (46)						
				PTFE	31.3 (454)	22.6 (328)	44.3 (643)												
			750 3Bar	ULF	28.4 (412)	N/A													
				PTFE	31.3 (454)														
			750 4Bar	ULF	28.4 (412)			N/A						N/A					
				PTFE	31.3 (454)														
DN80 (NPS 3)	70 Bal	20	750 2Bar	ULF	51.7 (750)	51.7 (750)		51.7 (750)	---			51.7 (750)	3.2 (46)						
				PTFE		N/A													
			750 3Bar	ULF		N/A													
				PTFE															
			750 4Bar	ULF			N/A						N/A						
				PTFE															
DN100 (NPS 4)	90 Bal	20	750 2Bar	ULF	51.7 (750)	46.8 (679)	51.7 (750)	51.7 (750)	---			51.7 (750)	3.2 (46)						
				PTFE		51.7 (750)													
			750 3Bar	ULF		N/A													
				PTFE															
			750 4Bar	ULF				N/A						N/A					
				PTFE															

Table 9. Shutoff Classification Capability for Bellows Bonnet Construction and Low Strength Stem<sup>(1)</sup>

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close						
					Shutoff	Supply pressure						
						2 Bar (29 psi)	2.5 Bar (36 psi)	3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)
						Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff	Shutoff
DN15 to 25 (NPS 1/2 to 1)	4.8	20	225 2Bar	ULF	IV,V,VI	IV,V,VI		IV,V,VI		---	---	
			PTFE	N/A		IV,V,VI						
			225 3Bar				ULF	N/A				
			PTFE									
			225 4Bar	ULF								
	PTFE											
	9.5	20	225 2Bar	ULF	IV,V	IV,V,VI		IV,V,VI		---	---	
			PTFE	IV,V,VI	N/A		IV,V,VI					
			225 3Bar					ULF	N/A			
			PTFE									
225 4Bar			ULF									
PTFE												
DN20 to 40 (NPS 3/4 to 1-1/2)	14	20	225 2Bar	ULF	IV	IV,V	IV,V,VI	IV,V,VI		---	---	
			PTFE	IV,V	N/A		IV,V,VI					
			225 3Bar	ULF				IV,V,VI	N/A			
			PTFE									
			225 4Bar	ULF								
			PTFE									
DN25 to 50 (NPS 1 to 2)	22	20	225 2Bar	ULF	IV,VI	IV,VI	IV,V,VI	IV,V,VI		---	---	
			PTFE	IV,V,VI		IV,V,VI	IV,V,VI					
			225 3Bar	ULF	N/A			IV,V,VI				
			PTFE									
			225 4Bar	ULF								
			PTFE									
DN40 to 50 (NPS 1-1/2 to 2)	36	20	225 2Bar	ULF	IV,VI	IV,VI	IV,VI	IV,V,VI	IV,V,VI	---	---	
			PTFE	IV,V,VI		IV,V,VI	IV,V,VI					
			225 3Bar	ULF		N/A		IV,VI	IV,V,VI			
			PTFE	IV,V,VI				IV,V,VI				
			225 4Bar	ULF	IV,V,VI	N/A		IV,V,VI				
			PTFE									
			750 2Bar	ULF	IV,V,VI	IV,V,VI	---	---		---		
			PTFE	N/A								
			750 3Bar			ULF	N/A					
			PTFE									
750 4Bar	ULF											
PTFE												
DN50 (NPS 2)	46	20	225 2Bar	ULF	---	IV,VI		IV,VI	IV,V,VI	---	---	
			PTFE	IV,VI	N/A		IV,V,VI	IV,V,VI				
			225 3Bar				ULF		IV,VI	IV,V,VI		
			PTFE				N/A					
			225 4Bar		ULF	IV,V,VI	IV,VI	---	---			---
			PTFE	IV,V,VI	IV,V,VI							
			750 2Bar	ULF	N/A							
			PTFE									
			750 3Bar	ULF	N/A							
			PTFE									
750 4Bar	ULF											
PTFE												

-continued-

**Table 9. Shutoff Classification Capability for Bellows Bonnet Construction and Low Strength Stem<sup>(1)</sup> (continued)**

Valve Size	Port Size	Max Travel	Actuator construction	Packing	Air to Open	Air to Close																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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	2 Bar (29 psi)	2.5 Bar (36 psi)				3 Bar (44 psi)	3.44 Bar (50 psi)	4 Bar (58 psi)	5 Bar (72 psi)	6 Bar (87 psi)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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DN80 (NPS 3)	36	20	750 2Bar	ULF	IV,V,VI	IV,V,VI		IV,V,VI	---	---																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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DN80 -100 (NPS 3 to 4)	46	20	750 2Bar	ULF	IV,V,VI	IV,VI	IV,V,VI	IV,V,VI	---	---																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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1. CLVI shutoff is achieved through the use of a soft seat in ports greater than or equal to 22mm.





## Product Bulletin

51.1:GX(S1)  
February 2012

**GX Control Valve and Actuator**  
D103209X012

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